

GIRSKIY, V.A.; SHPRINGER, A.N.

Standardization of model cement storage yards. Mekh. stroi. 18
no. 3:8-11 Mr '61. (MIRA 14:5)

1. Giprostroyindustriya.
(Cement--Storage)

GIRSKIY, V.A., inzh.; SHPRINGER, A.N., inzh.

Level indicators for cement. Bet. i zhel.-bet. 8
no.11:519-521 N '62. (MIRA 15:11)
(Level indicators) (Cement--Storage)

SHPRINGER, A.N.

Organization of the unloading of materials at reinforced concrete products enterprises. Bet. 1 zhel.-bet. 8 no.2:86-88 F '62.

(MIRA 16:5)

1. Glavnyy tekhnolog Vsesoyuznogo gosudarstvennogo proyektno-konstruktorskogo instituta, Moskva.

(Concrete plants—Equipment and supplies)
(Loading and unloading)

SHPRINK, B. E., Prof

USSR/Engineering
Engines, Diesel

Aug 48

"Fifty Years of Diesel Production," A. A. Popov, Cand Tech Sci, and Prof B. E.
Shprink, 2 $\frac{1}{4}$ pp

"Vest Mashinostroy" No 8

Reviews progress of diesel construction in Russia from 1898 to 1948.

PA 14/49T33

ANDRIANOV, V.N., prof.; DRUZHININA, N.A., assistant; MISHARINA, Ye.A.,
kand.tekhn.nauk; NIKONOV, L.V., dotsent; ~~SHPRINK~~, B.E., prof.,
retsensent; GLEBOVICH, A.A., kand.tekhn.nauk; GIL'MAN, Ye.A.,
red.; VOZNESENSKIY, A.D., tekhn.red.

[Electric machines; instructions and assignments for students
specializing in the electrification of agriculture] Elektricheskie
mashiny; metodicheskie ukazaniia i kontrol'nye zadaniia dlia stu-
dentov spetsial'nosti "elektrifikatsiia sel'skokhoziastvennogo
proizvodstva." Pod red. V.N.Andrianova i A.A.Glebovicha. Moskva,
Mosk. in-t mekhanizatsii i elektrifikatsii sel'.khoz., 1958. 56 p.
(MIRA 12:2)

(Electric machinery)

BOGATSKIY, D.P., prof.; MINEYEVA, I.A., dots.; SHPRINK, B.E., prof., re-
tsenzent; MAMEDOV, A.M., dotsent, retsenzent; KUZNETSOVA, L.A.,
red.; VLADIMIROVA, L.A., tekhn. red.

[Phase rule and its application in the technology of metals;
lectures for students of the engineering faculty] Pravilo faz i ego
primeneniye v tekhnologii metallov; lektzii dlia studentov inzhenernogo
fakul'teta. Moskva, Vses. sel'khoz. in-t zaochnogo obrazovaniia,
1960. 39 p. (MIRA 14:7)

1. Zaveduyushchiiy kafedroy remonta traktorov, avtomobiley i sel'sko-
khozyaystvennykh mashin Vsesoyuznogo sel'skokhozyaystvennogo instituta
zaochnogo obrazovaniya (for Mamedov)
(Metallurgy) (Phase rule and equilibrium)

DMITRIYEVA, R. [translator]; LEZINOVA, N. [translator]; SHPRINK, V.
[translator]; TSYHLIN, L.M., red.; SEMENOVA, N.Kh., red.;
PYATAKOVA, N.D., tekhn.red.

[Agricultural statistics in capitalist countries] Statistika
sel'skogo khoziaistva v kapitalisticheskikh stranakh; sbornik
statei. Moskva, Gosstatizdat TsSU SSSR, 1960. 226 p.
(MIRA 14:1)

(Agriculture--Statistics)

TARTAKOVSKIY, V.I.; ETKIN, A.A.; KOGAN, M.L.; SHPRINTSEN, G.I.

Analog position system of program control for boring and turning lathes.
Stan. 1 instr. 36 no.4:18-20 Ap '65. (MIRA 18:5)

SHENHESIN, A.G.

Russian transcription of Chinese geographical names. Surany 1 nar.
(MIRA 17:11)
Vost. no. 3:83-96 '64.

SHPRINTSIN, N.

History - Panama

"Panama and the Panama Canal." V. M. Venin. Reviewed by N. Shprintsin. Sov. etn. no. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

SHPRINTSIN, N.G.

View of Petersburg from the collection of the "Kunstkamera." Izv. Vses. geog.
ob-va 85 no. 4:475-480 JI-Ag '53. (MLRA 6:8)
(Leningrad--Art--Galleries and museums) (Galleries and museums--Art--
Leningrad)

SHPRINTSIN, N.G.

"Mexico." A.N.Goncharov; "Cuba." A.I.Zentsova. Reviewed by
N.G.Shprints in. Izv.Vses.geog.ob-va 86 no.5:475-477 S-0 '54.
(MLBA 7:10)

(Goncharov, A.N.) (Zentsova, A.I.) (Mexico) (Cuba)

3(5)

SOV/12-91-1-20/22

AUTHORS: Shprintsin, N.G. and Kogan, M.A.

TITLE: None Given

PERIODICAL: Izvestiya Vsesoyuznogo geograficheskogo obshchestva, Vol 91,
Nr 1, pp 101-103 (USSR) 1959

ABSTRACT: The author reviews three novels by the Polish writer A.
Fiedler.

Card 1/1

SHPRINTSIN, V.N., inzh.

Activity of the Maritime Territory Regional Administration of the
Scientific and Technical Society of the Shipbuilding Industry during
the period 1955-1958. Sudostroenie 25 no.1:91 Ja '59.(MIRA 12:3)
(Maritime Territory--Shipbuliding)

ISACHENKO, V.; SHPRINTSIN, V.

Solid education for future engineers. NTO 2 no.11:49 N '60.

(MIRA 13:11)

1. Predsedatel' soveta Nauchno-tekhnicheskogo obshchestva Dal'ne-
vostochnogo politekhnicheskogo instituta (for Isachenko). 2. Chlen
Primorskogo krayevogo pravleniya Nauchno-tekhnicheskogo obshchestva
sudostroitel'noy promyshlennosti (for Shprintsin).

(Marine engineering--Study and teaching)

SHCHURENKO, Yu.; OSTROVSKIY, M.; SHPRINTSIN, V., dots.

Alternating-current electric drive for cargo winches on "Andizhan"-type vessels. Mor. flot 20 no.11:24-27 N '60. (MIRA 13:11)

1. Starshiy inzhener-elektrik mekhaniko-sudovoy sluzhby Dal'nevostochnogo parokhodstva (for Shchurenko). 2. Nachal'nik elektrootdela Dal'nevostochnogo parokhodstva (for Ostrovskiy). 3. Dal'nevostochnyy politekhnicheskiy institut imeni Kuybysheva (for Shprintsin).
(Winches--Electric driving) (Electricity on ships)

SHPRINTSIN, V.N., inzh.

Installation of shaft generators on ships. Sudostroenie 27
no.6:39-42 Je '61. (MIRA 14:6)

(Ship propulsion, Electric)

STRAKHMYSTER, V.A., inzh.; SHPRINTSIH, V.N., inzh.

Selection of measuring elements for control systems.
Sudostroenie 30 no.5:35-36 My '64. (MIRA 17:5)

L 1579-66 EWT(1)/EWA(h)

AM5021949

BOOK EXPLOITATION

UR/

629. 12.02

Shprintsain, Viktor Nikolayevich⁵⁵

Marine power generators²⁵ (Sudovyye valogeneratory): Leningrad, Izd-vo "Sudostroyeniye," 1965. 236 p. illus., biblio. 1450 copies printed.

TOPIC TAGS: power generator, marine power generator⁵⁵, synchronous power generator, dc power generator, ac power generator, power generator stabilization

PURPOSE: The book is intended for engineering-technical workers in the shipbuilding industry. It may also be used as a textbook by senior students in shipbuilding institutes.

COVERAGE: The use of marine ac and dc power generators, driven by main engines through mechanical, hydraulic, electrical, or other means, is discussed. The advantages and disadvantages of marine power generators are reviewed and their layouts are discussed.

Card 1/3

L 1579-66
AM5021949

Based on the general theory of power generators, methods for calculating and selecting their components and electrical layouts are analyzed, assuming that the resulting parameters are invariant due to changes in the speed of rotation. Calculations of actual charts of ac and dc power-generator layouts are given.

TABLE OF CONTENTS:

Introduction -- 3

Ch. I. Power generators and their requirements -- 7

Ch. II. Design fundamentals of power generators with variable speed of rotation -- 64

Ch. III. Use of combined systems of automatic control for stabilizing the parameters of the electric-energy output of marine power generators -- 117

Card 2/3

L 1579-66

AM5021949

Ch. IV. Calculation of automatic systems of power generators by
electronic analog computers -- 195

Bibliography -- 234

SUB CODE: EE

SUBMITTED: 08Jan65

NO REF SOV: 026

OTHER: 001

DATE ACQ: 29Sep65

Card *dg* 3/3

ABRAMOV, O.V., inzh.; SHERINTSIN, V.N., kand. tekhn. nauk

Considering the reliability factor in determining the economic
efficiency of automation. Sudostroenie 31 no.5:35-37 My '65.
(MIRA 18:8)

I. 08970-67 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l)

ACC NR: AP6029793

SOURCE CODE: UR/0119/66/000/008/0023/0024

AUTHOR: Bil'ov, P. D. (Engineer); Shprits, E. I. (Engineer)

56

ORG: none

TITLE: Luminescent display of an information system

SOURCE: Priborostroyeniye, no. 8, 1966, 23-24

TOPIC TAGS: display panel, luminescent ^{material,} display, automatic control, steam power plant, ^{signal processing}

ABSTRACT: A functional diagram and principal transistorized circuit diagram of an output unit with a luminescent display are shown. The unit, which is a part of a boiler-turbine automatic control system, performs these operations: storing error signals, detecting new error signals, changing signal shape upon its acknowledgment by the human operator, controlling an audible signal, cancelling

Card 1/2

UDC: 62.523.8:666.265

SHFRITS, E.I.

Device for volts-to-digit conversion. Izv. tekhn. no.8:45-
47 Ag '63. (MIRA 16:10)

PODAKOV, A.S.; CHAKOVSKIY, R.V.; SHPRITS, E.I.

Two-stage commutator for automatic data input in digital control computers. Avtom. i prib. no.4:30-33 O-D '63. (MIRA 16:12)

1. Institut avtomatiki Gosplana UkrSSR.

SHPRITS, E.I.

Protection circuit of transistor voltage stabilizers from overloads
and short circuits. Izv.tekh. no.8:53 Ag '64.

(MIRA 17:12)

ACC NR: AP5023277

UR/0302/65/000/003/0042/0044
621.373.53

AUTHOR: Shprits, E. I. ; Suslenko, M. D.

TITLE: Time delay element for digital machines

SOURCE: Avtomatika i priborostroyeniye, no. 3, 1965, 42-44

TOPIC TAGS: digital system, automatic control system, electronic circuit, digital computer system, computer component, delay circuit

ABSTRACT: Existing time delay (γ) elements exhibit numerous deficiencies. To reduce the size of the necessary capacitances (C), the values of k must be increased in the $\gamma = kC$ equation. However, large k values lead, usually, to decreases in stability of the respective devices. To avoid this difficulty, the Institut avtomatiki Gosudarstvennogo komiteta po priborostroyeniyu, sredstvav avtomatizatsii i sistemam upravleniya pri Gosplane SSSR (Institute of Automation, State Committee for the Design of Instruments, Means of Automation, and Control Systems attached to Gosplan SSSR) developed and tested a time delay circuit allowing the use of electrolytic capacitors. Such a circuit produces large time lags without a need for large size blocks (the entire element is mounted on a 60 x 60 x 12 mm printed circuit block). The experimental unit is currently in use in a boiler-turbine-generator control system. Orig. art. has: 2 formulas, 1 figure, and 1 table.

ASSOCIATION: None

Card 1/2

L 491C-66

ACC NR: AP5023277

SUBMITTED: 00

NO REF SOV: 002

ENCL: 00

SUB CODE: IE, DP, EC

OTHER: 000

TC
Card 2/2

KRINITSIN, V.M.; CHACHKO, A.G.; SHEPITS, E.I.

Noncontact device for measurements by calling. Avtom. 1 prib. no.2:
47-49 Ap-Je '65. (MIRA 18:7)

L 06277-67 EWT(1) GG

ACC NR: AP6025076

SOURCE CODE: UR/0115/66/000/006/0043/0045

AUTHOR: Shprits, E. I.

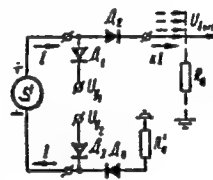
ORG: none

TITLE: Diode ²⁵switch with constant input resistance

SOURCE: Izmeritel'naya tekhnika, no. 6, 1966, 43-45

TOPIC TAGS: electronic switch, diode switch

ABSTRACT: Availability of various Soviet-made standardized transducers (EAUS-A, USAKR) with d-c output makes possible the use of diode-type switches for applying many sensor electric signals to a single-channel measuring device. Changing input resistance of such switches in the open and closed states of the diode has been the only objection to their use. This situation can be remedied by doubling the diodes (see figure); the double-diode circuit has high and constant input resistance and hence does not affect the voltage coming from sensor S. A number of such diode circuits control corresponding transistorized switches, the latter making final connection to a measuring instrument or a computer. The switch can operate at a rate of 100 changes a second; it introduces an error of 0.1% into the switched signals at temperatures -10 +50C. Orig. art. has: 2 figures and 7 formulas.



Card 1/1 SUB CODE: 09 /SUBM DATE: none / ORIG REF: 002

UDC: 621.318.57

SHPRITSMAN, Ya. M.

Wine and Wine Making

Losses of wine through storage and aging in oak containers.
Vin. SSSR 12 No. 8, 1952.

Monthly List of Russian Accessions, Library of Congress,
December, 1952. UNCLASSIFIED.

10/10/19 17

✓ A rapid method for the determination of alcohol in the residues of wine industry. M. V. Bondarev and E. M. Shpritsman (Inst. "Magarach," Kishinev). *Sadokhodstvo, Vinogradarstvo i Vinodelie Moldavii* 11, No. 3, 60-1 (1956). — The app. for the rapid detn. of alc. in raisin residues by Brun and Vezinet (C.A. 47, 12747a) has been slightly modified for the detn. of alc. in grape refuse and the yeast residue. The volatile org. acids are not neutralized before the distn. The amt. of the acids in the distillate is detd. by titration with 0.1N alkali and the corresponding correction (+0.083% alc./10 ml. distillate/1 ml. 0.1N alkali) is then made in the original alc. concn. of the distillate obtained by the sp. gr. detn.

2/

E. Wierbicki

SHPRITSMAN, E. M.

✓ The role of oak wood in the aging of cognacs. E. M. Shpritsman and D. A. Novokharko. *Sadovodstvo, Vinogradarstvo i Vinodelie Moldavi* 11, No. 4, 47-50 (1956).
 During the aging of cognacs in oak containers chem. and phys. interdiffusion takes place between the wood and the product; this is mainly responsible for the organoleptic qualities of the finished product. A one-way paper chromatographic method is described (with the solvent butanol:acetic acid:distd. water = 40:12:30) for the analysis of the tannin complex of oak wood (hot-water exts. of oak wood shavings were filtered, the filtrates treated with $Pb(AcO)_2$, the Pb-tannin complex was decompd. by 5% H_2SO_4 , excess H_2SO_4 pptd. with $BaCO_3$, soln. to pH 3.0, the tannin soln. obtained vacuum-evapd. under a CO_2 stream, the dry residue hydrolyzed with 5% HCl, the hydrolyzate extd. with Et_2O and $AcOEt$, and bath exts. were paper chromatographed). The results indicate that the oak-wood tannins consist of at least 3 components, readily sol. in alc. and $AcOEt$, which on acid hydrolysis yield gallic and ellagic acids and an unidentified phenol; sugars are represented by one spot with the R_f value (0.16) known for glucose. During the aging of cognac in oak containers the amt. of tannins increases in the first 3-4 years and then remains nearly const. (0.3-0.4 g./l.), while the amt. of extractable substances increases continuously (0.238 and 1.693 g./l. of the tannin-free dry residue after 2 and 9 years' aging, resp.). By aging cognac in glass containers in the presence of O about 25-30% of the tannin content is oxidized. It is concluded that an equil. exists between the tannin passing from the oak container and its oxidized fraction in the cognac.
 11 references.
 E. Wachtel

SHPRITSMAN, E.M.

Tannins of oak wood and their transformations during the aging of cognac
alcohols. Trudy MNIIPP 2:3-16 '62. (MIRA 16:4)
(Tannins—Analysis) (Brandy)

SHPRITSMAN, E.M.

Redox processes in the maturing of cognac alcohols and brandies. Trudy
MNIIPP 2:17-30 '62. (MIRA 16:4)

(Brandy)

(Oxidation-reduction reaction)

SHPRITSMAN, F.M.

Standardization at the Riga Electric Plant. Standartizatsiya 24
no.12:28-30 D '60. (MIRA 13:11)
(Riga--Electric industries)

BERNSHTEYN, A.L.; SHPRITSMAN, L.D.

Mechanizing the output of sheet rubber. Izobr. v SSSR 2 no.9:26
S '57. (MIRA 10:10)

(Foam rubber)

SHPRUNG, N., Geroy Sotsialisticheskogo Truda.

During the last five years. Sel'. stroi. 14 no.7:6-7 J1 '59.
(MIRA 12:10)

1.Sekretar' Minusinskogo gorkoma Kommunisticheskoy partii Sovetskogo
Soyuza.
(Minusinsk District--Farm building)

SHVACHKIN, Yu.P.; VITOL, M.Ya.; SHPRUNKA, I.K.

Removal of glycine from reaction mixtures by a microbiological method. Zhur. ob. khim. 34 no.10:3508-3509 0 '64.

(MIRA 17:11)

1. Moskovskiy gosudarstvennyy universitet im. Lomonosova.

SHVACHKIN, Yu.P.; SHPRUNKA, I.K.

Synthesis of a pyrimidine analog of 2,4-dihydroxyphenylalanine.
Vest. Mosk. un. Ser. 2: Khim. 19 no.6:72-73 N-D '64.

(MIRA 18:3)

1. Kafedra organicheskoy khimii Moskovskogo universiteta.

OBOLENSKIY, A.S.; SHPRYGIN, V.I.

Automotive trucks with jib cranes. Biul.tekh.-ekon.inform.Gos.
nauch.-issl.inst.nauch.i tekhn.inform. no.9:95-96 '63. (MIRA 16:10)

BELIK, Sh.L., inzhener-elektrik; SHPRYGOV, Yu.M., tekhnik-elektrik.

What is lacking in the power engineers' handbook. "Handbook for a power engineer in the textile industry". Reviewed by Sh.L. Belik and others. Tekst. prom. 17 no.3:66-68 Mr '57. (MLBA 10:4)
(Electric machinery) (Textile machinery)

SHPUGA, G.M.

Vascular anastomosis and kidney transplantation [with summary in English]
Eksper.khir. 1 no.1:19-27 Ja-F '56 (MIRA 11:10)

1. Iz kafedry farmakologii Ivanovskogo meditsinskogo instituta.
 (KIDNEYS, surg. transpl.
 exper., vasc.anastomosis after Carrel (Rus))
 (TRANSPLANTATION, exper.
 kidneys, vasc. anastomosis after Carrel (Rus))
 (BLOOD VESSELS, surg.
 exper. anastomosis after Carrel in kidney transpl. (Rus))

SHPUGA, G. M. Doc Med Sci -- (diss) "On the function of the
transplanted kidney." Ivanovo, 1957. 22 pp. (Acad Med Sci USSR). 250 copies.
(KL, 8-58, 108)

-56-

SHPUGA, K., kandidat sel'skokhyaystvennykh nauk.

Fertilizers. Nauka i zhizn' 22 no.2:17-18 F '55.
(Fertilizers and manures)

(MIRA 8:3)

SHPUGA, L.M., LEBEDEV, A.A.

Function of a reinnervated transplanted kidney [with summary in English]
Eksper.khir. 1 no.4:59-64 J1-Ag '56 (MIRA 11:10)

1. Iz kafedry farmakologii Ivanovskogo meditsinskogo instituta.
(KIDNEYS, transpl.
exper., re-inner. (Rus))

ROMASHOV, F.N.; KAUSEV, I.S.; TERENT'YEVA, L.M.; NISNEVICH, E.D.; SHPUGA, O.G.

Use of isolated coronary perfusion for the suturing of atrial septal defects under moderate hypothermia. Khirurgiia no.10:43-48 '64. (MIRA 18:8)

1. Otdeleniye vrozhdennykh porokov (zav. V.I.Burakovskiy), laboratoriya anesteziologii (zav. G.A.Ryabov), laboratoriya funktsional'noy diagnostiki (zav. G.G.Cel'shteyn) Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A.Kolesnikov, nauchnyy rukovoditel' - akademik A.N.Bakulev) AMN SSSR, Moskva.

5591. CERTAIN FEATURES OF HEART RATE REGULATION IN CORONARY INSUFFICIENCY (Russian text) - Shpuga O. G. Centr. Inst. for Consult. on the Working Capacity and Org. of Employment of Invalids, Moscow - BYULL. EKSPER. BIOL. I MED. 1957, 44/7 (37-40) illus. 2

A study was made of the changes in heart rate in 28 patients with coronary insufficiency, using stimuli which produce, in the normal subject, acceleration of the heart rate (emotional stimuli, nitroglycerin) or slowing of the heart (Aschner reflex and carotid sinus reflex). Continuous recording of the pulse, the skin-galvanic reflex, vascular reactions (plethysmography), blood pressure and electrocardiogram was maintained during the experiment. The control group consisted of 78 patients with cardiac pains of non-coronary and mixed aetiology and of 6 healthy subjects. The investigations showed that patients with pains of coronary origin had less capacity for changes in the rate of cardiac contractions under the influence of accelerating stimuli and a more pronounced reaction of cardiac slowing to stimuli causing bradycardia. Maximal acceleration of the pulse rate by emotional stimuli was 6.5 strokes, whilst in the control group it was 14-19.5. Pressure in the region of the carotid sinus slowed the cardiac rhythm in 98% of patients with coronary insufficiency by an average of 12 strokes and in only 28% in the control group (by 4-8 strokes). Such slowing of the heart rate was not infrequently absent in the healthy subjects. The relative preponderance of inhibitory influences on the heart rate in patients with coronary insufficiency is, apparently, of protective-compensatory significance and is connected, primarily, with readjustment of reflex mechanisms regulating cardiac rhythm. References 6.

Davydova - Moscow (S)

BURAKOVSKIY, V.I.; MURAV'YEV, M.V.; GEL'SHTEYN, G.G.; YE'VLEYEV, Yu.V.;
LAGUTINA, A.I.; ROMASHOV, F.N.; RYABOV, G.A.; ROSLAVLEVA, N.G.;
TERENT'YEVA, L.M.; SHPUGA, O.G.

Operation on the "dry " heart during hypothermia in patients
with congenital heart defects. Grud.khir. no.3:3-14 '61.

(MIRA 14:9)

1. Iz otdeleniya zabolevaniya serdtsa i sosudov u detey (zav. -
kand.med.nauk V.I. Burakovskiy) Instituta grudnoy khirurgii
(dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akad.
A.N. Bakulev) AMN SSSR. Adres avtorov: Moskva, Leningradskiy
prosp., d.8. Institut grudnoy khirurgii AMN SSSR.

(HEART--ABNORMALITIES AND DEFORMITIES) (HYPOTHERMIA)
(PERFUSION PUMP (HEART))

POLAND/Cultivated Plants - Medicinal. Essential Oils. Toxins.

M.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15879

Author : W. Dembskaya, K. Shpunar, J. Zayenchkovskiy

Inst : State Scientific Institute for Raw Medicinal Plants.

Title : Observations in Plantations of the Common Valerian Made
in 1955.
(Rzul'taty nablyudeniya nad plantatsiyami valeriany ledar-
stvennoy v 1955 godu).

Orig Pub : Biul. Fanstw. inst. nauk. leczn. surow. rosl. Poznaniu,
1956, 2, No 3, 164-171.

Abstract : The observations were made at 14 plantations containing
various varieties of *Valeriana officinalis*, var. *latifolia*,
var. *tenuifolia*, var. *media*, distributed in Poznan and
Warsaw Provinces in varying climatic and edaphic condi-
tions. With a bad spring and favorable summer and fall

Card 1/2

SHPUNBERG, Ya. N.

DECEASED
c. '62

1964

METALS
ROLLING MILLS

SHPUNDRA, P.K.

The plant is ready for the industrial season. Sil'.bud.
12 no.4:19-20 Ap '62. (MIRA 15:8)

1. Glavnyy inzh. Zolotonshskoy mezhkolkhoznoy stroitel'skoy
organizatsii Cherkasskoy oblasti.
(Cherkassy Province--Clay industries)

LIPTSINA, A.I.; SHENBERG, B.V.; Prinimala uchastiye SHPUNDZAN, D.Yu.

New device for controlling the process of alcoholysis during
the production of modified glyptal resins. Lakokras. mat. i
ikh prim. no.6:77-78 '61. (MIRA 15:3)
(Alcoholysis) (Gums and resins)

H
SPUNGEN, Sh.

^ Zoohygiene and Udder Diseases, Tallin, Estonian State Press, 1950, 20 pages
with illustrations, 50 kopeks, Copies -- 3,000. In Estonian.

SC: Report, U-4724, Sept. 30, 1953, . (Veterinaryiya,
No. 4, Apr. 1951, pp. 60-61, Moscow.)

SHPUNGEN, Sh.

SHPUNGEN, Sh.

Brucellosis of cattle. Tallin. Estonian State Publishing House, 1952.
16 pages. Free. 5,000 copies. (Ministry of Agriculture of the Estonian
SSR, Veterinary Department). In Estonian.

Source: Veterinariya: 30; 3; March 1953 uncl
TAECON

Foot and mouth disease and the measures of the fight against it."
Tallin, Estonian State Publishing House, 1952. 32 pages with
illustrations, price 40 kopeks, 5,000 copies, In Estonian.
SO: Veterinariya; 26(5). May 1953

30

SHPUNGEN, S.

Avoid the diseases of rabbits. p. 558

SOTSIALISTLIK POLLMMAJANDUS. Tallinn, Estonia. Vol. 14, no. 12, June 1959

Monthly List of East European Accessions (EEAI), LC. Vol. 8, No. 9, September 1959
Uncl.

SHPUNGIN, L., kand.ekonom.nauk

Methodology of planning public food service. Sov. torg. 35 no.9:39-42
S '62. (MIRA 16:2)

(Restaurants, lunchrooms, etc.)

OCHERETYANNYI, M.; SHPUNGIN, L.

Refrigeration and Refrigerating Machinery

Cut down expenses in running refrigerating machinery, Sov. torg. No. 2, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

SHPUNGIN, Leyb Iosifovich; KOMAROVA, T.F., red.; SAVCHENKO, Ye.V.,
tekhn.red.

[Public food service and the seven-year plan] Obshchestvennoe
pitaniye v semiletke. Moskva, Izd-vo "Znanie," 1960. 31 p.
(Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i
nauchnykh znaniy. Ser.3, Ekonomika, no.28).
(Restaurants, lunchrooms, etc.) (MIRA 13:10)

SHPUNGIN, L.; GELLER, G.

Measuring labor productivity in public food service. Sots.trud
5 no.3:65-70 Mr '60. (MIRA 13:6)
(Restaurants, lunchrooms, etc.--Labor productivity)

SHFUNGIN, L., kand.ekon.nauk

Labor expenditure should be made the basis of a plan. Sov.
torg. 33 no. 9:39-41 S '60. (MIRA 14:2)
(Restaurants, lunchrooms, etc.)

SHVACHKIN, Yu.P.; SHPRUNKA, I.K.; KAZAKOVA, G.V.

Synthesis of deuterated 2-thiouracils. Zhur. ob. khim. 34 no.11:
3846-3847 N '64 (MIRA 18:1)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

AUTHORS: Geguzin, Ya.Ye. and Shpunt, A.A. SOV/70-4-4-18/34

TITLE: The Investigation of the Process of High-temperature Self-healing of Macro-defects on the Surfaces of Single Crystals of Rock Salt

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 4, pp 579-586 (USSR)

ABSTRACT: Details of the levelling of the surface of a single crystal of NaCl which occurs at high temperatures (up to 790 °C) have been observed and described. Using microscopic and interferometric methods the healing of artificially produced defects in the form of grooves of definite geometry has been observed. It is shown that the process of self-healing of grooves proceeds with a speed diminishing with time. It is found that the distortion of the crystal lattice promotes the acceleration of the process of the high-temperature healing of material defect. It is further shown that transport of material in the gaseous phase substantially determines the kinetics of the high-temperature healing of macroscopic surface defects. The grooves were made with a diamond pyramid from a micro-hardness tester. The angle between opposite faces was

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emical

GENUZIN, Ya.Ye.; STARTSEV, V.I.; BURAVLEVA, M.G.; NADIKYAN, R.A.; NARBUT,
T.P.; SHPUNT, A.A.

Cloudiness ("agine") of pellets pressed from ionic crystal powders.
Kristallografiia 5 no.2:295-302 Mr-Apr '60. (MIRA 13:9)

1. Kharkovskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta
khimicheskikh reaktivov.

(Salt)

(Potassium chloride)

S/120/62/000/001/013/061
E073/E535

AUTHORS: Geguzin, Ya.Ye. and Shpunt, A.A.

TITLE: Producing thin crystalline scintillating plates
by the high-temperature forming method

PERIODICAL: Priory i. tekhnika eksperimenta, no. 1, 1962,
59 - 60

TEXT: In solving problems relating to spectroscopy of elementary particles the necessity arises of using very thin scintillating single crystals. The production of such thin films from massive single crystals by grinding involves considerable difficulties. The authors produced such films by hot-forming small pieces of CsI(Tl) single crystals in a press mould between two parallel plates at 500 - 600 °C. A load of about 0.5 tons was used for producing a 50 - 60 μ thick, 2 cm² film. The resulting films were optically transparent and did not suffer "ageing", which had been observed for thin plates produced by pressing finely-disperse powders. The energy

Card 1/2

Producing thin crystalline S/120/62/000/001/015/061
E073/E335

resolutions of a typical series of thin CsI(Tl) films, obtained in investigations with α -particles, $E = 5.3$ MeV (Po^{210}), were as follows:

No. /	1	2	3	4	5	6	7	8	9	10
Film thickness, μ	100	80	100	80	110	100	120	90	90	90
Energy resolution, %	8.2	8	7.5	7.2	6.3	5.8	6	7	6	7.2.

The above data indicate that plastic deformation of a CsI(Tl) single crystal at an elevated temperature does not impoverish its scintillating properties and that the films are suitable for use as scintillators. There is 1 table.

Abstracter's note: this is a slightly abridged translation.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut
monokristallov (All-Union Scientific Research
Card 2/2 Institute for Single Crystals)

SUBMITTED: May 20, 1961

34249
 5/181/62/004/002/045/051
 B102/B138

189500

... and Shpunt, A.

... of "cleavage whiskers"

... v. 4, no. 2, 1962, 556 - 558

The formation of thread-like fragments on the cleavage planes of
 Si, Ge, InSb, $HgSe$, Hg_2Ge , MgO and Sb single crystals has already been
 observed (Ref. 1, see below). The same effect was now discovered with
 $NaCl$, NaI , KCl , KI , LiF , $HgNO_3$ and Bi and Sb. The dimensions of the

whiskers were determined by means of a Linnik microinterferometer type
 MM-1 (MII-10): 0.09-0.5-30 μ was the smallest, 300-300-32,000 μ the largest
 fragment observed. If h is the height of the fragment, equal to the
 crystal height, b the transverse dimension in the cleavage plane and l the
 length, $h \ll b \ll l$ usually holds. These so-called "cleavage whiskers" may be
 of complex shape and differ from the "growth whiskers" in that they are
 mechanical fragments of large crystals. This gives interest to the study
 of the mechanical characteristics. LiF whiskers of approximately square

and 1/3

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3/161/62/004/002/045/001
B102/B158

The strength of "cleavage whiskers"

Young's modulus E of elasticity was determined by the method of bending. The maximum deformation was determined photographically from $\epsilon = h/2r$ when r is the least radius of curvature of the bent crystal. Numerical results are given for three LiF whiskers:

Dimension in μ	$E, 10^{12}$ dyne/cm ²	ϵ_{\max} in %	σ_{\max} in kg/mm ²
690	1.2 ± 0.2	> 0.4	> 40
290	1.1 ± 0.2	> 1.7	> 190
240	1.0 ± 0.2	> 1.3	> 130

It was shown that in certain cases the strength of cleavage whiskers is that of bulky crystals by a factor of more than 200. Since the cleavage whiskers have the same mechanical properties as the grown ones, the properties of the latter cannot be attributed to peculiarities in the preparation structure obtained in growth. F. G. Strelkov and V. Ye. Zhurav are thanked for discussions. F. F. Lavrent'yev and L. M. Soyfer are thanked for preparing the metal single crystals. There are 2 figures, 1 table, and 13

S/181/62/004/003/025/045
B125/B102

AUTHOR: Shpunt, A. A.

TITLE: Study of the microrelief of the surface round the indentation of an indenter in NaCl-type crystals

PERIODICAL: Fizika tverdogo tela, v. 4, no. 3, 1962, 718 - 723

TEXT: The surface relief round the indentation of a diamond pyramid in the cleavage plane (100) of LiF and NaCl crystals studied by the interferometric method is compared with the dislocation density round the indentation. The crystal surface near the indentation is studied by an MII-4 (MII-4) interferometer microscopically and microinterferometrically. After the microrelief had been studied the crystals were etched to make visible the relief dislocations on the (100) face round the microindentation. The axes OX, OY, and OZ of the coordinate system used are oriented along $[110]$, $[1\bar{1}0]$, and $[001]$ and the origin is on the cleavage plane in the center of the indentation. The OZ axis is a symmetry axis of the fourth order of the indentation. When the indenter is turned relative to the crystal, only the shape and the position of the maximum of the Holm

Card 1/3

the screw dis-
Soviet and 4 non-
eyser. Acta metallurgica, 3, 89,
1957; S. Tolansky a. D. G. Nickols.
Phys. Rev., 79, 723, 1953.

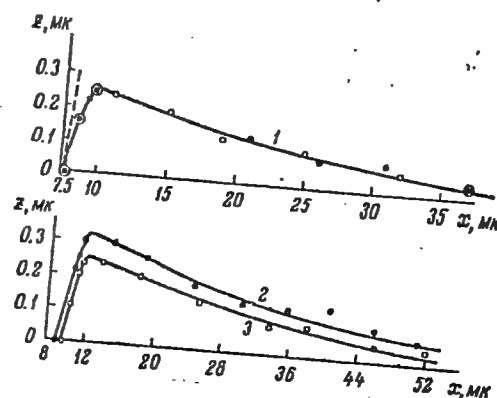
Study of the ...

ASSOCIATION: Institut teplofiziki Sibirskogo otdeleniya AN SSSR (Institute of Heat Physics of the Siberian Department AS USSR)

SUBMITTED: November 18, 1961

S/181/62/004/003/025/045
B125/B102

Fig. 5. Profile of the LiF-crystal surfaces near the indenter. Legend: (1) load 20 g; the two types of points correspond to the two elevations of the indentation pattern; the dashed line shows the relative position of the indenter; (2) and (3) load 40 g, for the profiles of the two elevations of the same indentation pattern.



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S/070/62/007/003/025/026
E132/E460

AUTHOR: Shpunt, A.A.

TITLE: On dislocations in crystals of LiF arising under the
action of concentrated loads

PERIODICAL: Kristallografiya, v.7, no.3, 1962, 474-476

TEXT: Concentrated loads were applied to crystals of optical quality LiF on their (100) faces by the pyramidal diamond marker of a TMT-3 (PMT-3) hardness tester. Dislocations were revealed by etching. The depth distribution of the dislocations was examined by dissolving the crystal. The contours in depth of the dislocation loops were plotted out and were found usually to be trapezoidal. In some cases, movement of the dislocations had taken place so that the jumps were found in the traces of the dislocation in depth. There are 5 figures. J-

ASSOCIATION: Institut teplofiziki Sibirskogo otdeleniya AN SSSR
(Institute of Heat Physics of the Siberian Section
AS USSR)

SUBMITTED: August 30, 1961

Card 1/1

S/181/62/004/008/030/041
B108/B102

AUTHORS: Strelkov, P. G., and Shpunt, A. A.

TITLE: Dependence of the strength of extruded whiskers on their dimensions

PERIODICAL: Fizika tverdogo tela, v. 4, no. 8, 1962, 2258 - 2261

TEXT: The bending strength of lithium fluoride whiskers produced by spontaneous extrusion was studied. It has been found that the elastic limit of the whiskers rises rapidly in the range of $a < 2 - 3$ (a^2 is the cross section of one filament). Various filaments of approximately the same cross section ($a \sim 1.7 \mu$) had elastic limits of 0.5 - 4%. Such different values are due to inaccurate measurement, different crystallographic orientation of the specimens, and other factors. In accordance with other research work it was established that extruded whiskers with $a \sim 1 \mu$ cannot contain any dislocations. The measurements yielded a strength of the order of magnitude of that strength that was expected according to theory. There are 2 figures. ✓

Card 1/2

Dependence of the strength ...

S/181/62/004/008/030/041
B108/B102

ASSOCIATION: Institut teplofiziki Sibirskogo otdeleniya AN SSSR Novosibirsk
(Institute of Heat Physics of the Siberian Department AS USSR
Novosibirsk) ✓

SUBMITTED: May 24, 1962

Card 2/2

S/181/63/005/003/013/046
B102/B180

AUTHORS: Fridman, V. Ya.. and Sapunt, A. A.

TITLE: Tensile test for crystal splinters ("fracture whiskers")

PERIODICAL: Fizika tverdogo tela, v. 5, no. 3, 1963, 783-789

TEXT: Following earlier bending tests (FTT, 4, 556 and 2258, 1962) carried out with crystal splinters, tensile tests are made with LiF and NaCl splinters diameter 0.7 - 6.3 μ , length 0.5-1.5 mm. The specially designed tester is described in detail. Numerical results are given for a large number of samples. In consecutive tests it was found that, as usual, the strength was equal to or greater than that measured in the previous test. No relation could be found between strength and length of splinter. The strength of NaCl splinters was found to equal that of grown whiskers of the same dimensions. One NaCl sample (510-8-1.7 μ) with particularly high strength ($\sigma=8.5$ kg/mm²) showed Lüders lines, indicating that rupture was preceded by plastic deformation. There are 4 figures and 2 tables.

Card 1/2

Tensile test for crystal splinter. ...

S/181/63/005/003/013/046
B102/B180

ASSOCIATION: Institut teplofiziki SO AN SSSR, Novosibirsk (Institute of
Thermophysics of SO AS USSR, Novosibirsk)

SUBMITTED: October 3, 1962

Card 2/2

S/181/63/005/003/014/046
B102/B180

AUTHORS: Fridman, V. Ya., and Snopunt, A. A.

TITLE: Investigation of the strength of LiF crystal splinters

PERIODICAL: Fizika tverdogo tela, v. 5, no. 3, 1963, 790-797

TEXT: The authors continue investigations (this issue, p. 783) of the mechanical properties of crystal splinters. Using the same tensile machine they determined the strength in dependence on the chip diameter a . The splinters were taken from the (100) face of optical LiF crystals (purity 99.9%) with an initial dislocation density of $1 \cdot 10^3 - 1 \cdot 10^5 \text{ cm}^{-2}$ which rose to $10^5 - 10^7 \text{ cm}^{-2}$ owing to the treatment. The splinters (0.5 - 40 μ thick and 0.1 - 2 mm long) were glued onto sections of tungsten wire (0.1 mm diam), heated ($\sim 200^\circ\text{C}$) and then stretched. The dependence $\sigma(a)$ was plotted for 65 samples. The values measured show considerable scatter, due partly to inaccuracy in measuring the sample dimensions (70% and higher errors for $a < 1 \mu$), for which reason the spread increases with decreasing a , reaching one order of magnitude. In all cases the strength was higher than that of

Card 1/2

Investigation of the strength of LiF ... S/181/63/005/003/014/046
B102/B180

massive crystals, e. g. for $a = 30-40 \mu$, 7-10 times. The effect of surface defects and the nature of the fracture was also investigated. One of the samples showed Lüders lines indicative of plastic deformation. The strength in shear tests was found to be $15-20 \text{ kg/mm}^2$, i. e. 20 - 40 times that of massive crystals, but 10-15 times lower than the theoretical value. Induced dislocations do not reduce, but slightly increase, strength. Several samples had strengths of 40 kg/mm^2 , which is about 50 times higher than that of massive crystals, but still one order of magnitude lower than the theoretical value. There are 7 figures.

ASSOCIATION: Institut te,lofiziki SO AN SSSR, Novosibirsk (Institute of Thermophysics of SO AS USSR, Novosibirsk)

SUBMITTED: October 3, 1962

Card 2/2

ACCESSION NR: AP4013510

S/0181/64/006/002/0489/0492

AUTHORS: Fridman, V. Ya.; Shpunt, A. A.

TITLE: Effect of dislocations in whisker crystals of lithium fluoride 20 microns thick

SOURCE: Fizika tverdogo tela, v. 6, no. 2, 1964, 489-492

TOPIC TAGS: dislocation, whisker crystal, lithium fluoride crystal, etching, selective etching, fresh dislocation, dislocation, etch pattern

ABSTRACT: The authors have devised a technique for etching whisker crystals and then examining them under the microscope. They tested 21 crystal fragments (from 4 to 23 microns wide) and 18 synthetic whisker crystals of LiF (1.5 to 15 microns wide). Etching time ranged from 40 sec to 5 min. The whiskers were grown by E. M. Nadgornyy's method (FTT, 3, 957, 1961). Etching was done on paired samples (one crystal fragment and one whisker crystal) for comparing etch patterns under identical conditions. In all investigated crystal fragments the etch pattern was found to be characteristic of fresh dislocations. On whisker crystals, etched at the same time as the crystal fragments, no etch pattern characteristic of fresh dis-

Card 1/2

ACCESSION NR: AP4013510

locations was detected. The authors were able to etch whiskers as small as 1.5 microns thick, whereas crystal fragments 4 microns thick were destroyed because of solution. The dislocation density was found to vary considerably in different parts of a crystal fragment, reaching 10^9 cm^{-2} . In places where the crystal fragment is bent, one observes the highest dislocation density and a zone of slipping. These features attest to plastic deformation of the crystal fragment during its development. Orig. art. has: 3 figures.

ASSOCIATION: Institut teplofiziki SO AN SSSR, Novosibirsk (Institute of the Physics of Heat SO AN SSSR)

SUBMITTED: 14Aug63

DATE ACQ: 03Mar64

ENCL: 00

SUB CODE: FH

NO REF SOV: 005

OTHER: 004

2/2

Card

I. 38605-65 EWT(1)/EWT(m)/EPF(c)/EWP(w)/EPF(n)-2/EPR/T/EWP(t)/EWP(b)/EWA(c)/EWA(s)/

ACCESSION NR: AP5005319

S/0181/65/007/002/0649/0650

EEC(b)-2 Pr-4/Ps-4/P1-4/Pu-4 LJP(c) JD/JH/JG/GG

AUTHORS: Shpunt, A. A.; Fridman, V. Ya.

TITLE: Comparison of the strength of "whiskers" and "chips" of lithium fluoride

SOURCE: Fizika tverdogo tela, v. 7, no. 2, 1965, 649-650

TOPIC TAGS: lithium fluoride, filamentary crystal, whisker, chip, tensile strength

ABSTRACT: This is a continuation of an earlier study (FTT v. 5, 790, 1963) of the transverse strength of crystalline "chips" of LiF, and is devoted to a study of the same dependence for LiF "whiskers" grown from a melt by the method of Nadgomy (FTT v. 3, 957, 1961). The experimental conditions were described in the earlier paper and also in FTT v. 5, 783, 1963. The test results show that whiskers and chips have equal strength, and their possible differences lie within the experimental error and scatter in the results of the experiments. "The authors thank P. G. Strelkov for continuous interest in the work." Orig. art. has: 1 figure.

ASSOCIATION: Institut teplofiziki SO AN SSSR, Novosibirsk (Institute of Thermophysics SO AN SSSR)

SUBMITTED: 31Aug64

ENCL: 00

SUB CODE: SS

Card 1/2

DOMNITSKIY, Vladimir Fedorovich; SHPUNT, G.M., red.; SIDEL'NIKOVA, L.A., red.
izd-va; BACHURINA, A.M., tekhn.red.

[Use of industrial power trucks in the lumber industry] Primenenie
avtopogruzchikov v lesnoi promyshlennosti. Moskva, Goslesbumizdat,
1957. 19 p. (MIRA 11:4)

(Industrial power trucks) (Lumbering)

SH punt 7. G.M.
DANILOVICH, Sergey Ivanovich, inzh.; SHFUNT, G.M., red.; FEDOROV, B.M., red.
izd-va; IVANCHENKO, N.A., tekhn. red.

[Bundling and transporting lumber] Paketirovanie i perevozka
pilomaterialov. Moskva, Goslesbumizdat, 1957. 31 p. (MIRA 11:7)
(Lumber—Transportation)

ZHELUDKOV, Aleksandr Georgiyevich; SHMAKOV, Aleksey Timoveyevich;
SHPUNT, G.M., red.; LYAKHOVICH, E.A., red.izd-va; KORNUSHINA,
A.S., tekhn.red.

[Tie manufacture] Shpalopil'noe proizvodstvo. Moskva, Goslesbum-
izdat, 1960. 223 p. (MIRA 13:12)
(Railroads--Ties)

PHASE I BOOK EXPLOITATION SOV/3791

Soveshchaniye po obrabotke zharoprochnykh splavov, Moscow, 1957.

Obrabotka zharoprochnykh splavov; [sbornik dokladov...] (Treatment of Heat-Resistant Alloys; Collection of Papers Read at the Conference), Moscow, Izd-vo AN SSSR, 1960. 231 p. 3,500 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR. Institut mashinovedeniya. Komissiya po tekhnologii mashinostroyeniya; Akademiya nauk SSSR. Institut metallurgii im. A.A. Baykova. Nauchnyy sovet po problemam zharoprochnykh splavov.

Resp. Ed.: V.I. Dikushin, Academician; Ed. of Publishing House: V.A. Kotov; Tech. Ed.: V.V. Bruzgul'.

PURPOSE: This book is intended for metallurgists.

COVERAGE: The book consists of thirty papers read at the Conference on the Treatment of Heat-Resistant Alloys held in Moscow by the Committee on Machine-Building Technology, Institute of the

Card 1/7

Treatment of Heat (Cont.)

SOV/3791

Shpunt, K.Ya. Some Special Features of the Making of Nickel Alloys [by the Melting Process]	21
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Card 3/7

SHFUNT, L.S., inzhener.

~~SHFUNT, L.S., inzhener.~~

Centrifugal pouring of bimetal bearings. Lit.proizv. no.12:28-29
D '55. (MLRA 9:3)

(Bearings (Machinery)) (Centrifugal casting)

SAVITSKAYA, R.S., inzh.; SHPUNT, M.I., inzh.

Computers for the control of petroleum refining processes. Mekh.1
avtom. proizv. 17 no.2:55-58 F '63. (MIRA 16:2)
(Petroleum—Refining) (Electronic computers)

SHPUNT, M.I., inzh.

Automatic quality analyzers in petroleum refining and petroleum chemistry. Mekh. i avtom.proizv. 17 no.10:51-55 0 '63. (MIRA 17:1)

SHPUNT, M.I.; Prinimali uchastiye: ZAYTSEVA, Ye.; KABANOVA, L.

Selecting parameters for the monitoring and controlling the
quality of petroleum products. Nefteper. i neftekhim. no. 3:
38-40 '64. (MIRA 17:5)

1. Spetsial'noye konstruktorskoye byuro po avtomatike v neftepe-
rerabotke i neftekhimii.

KHOKHRYAKOV, P.A., kand. tekhn. nauk; SHPUNT, M.I., inzh.

Designing systems for automatic quality control of petroleum
products. Mekh. i avtom. proizv. 19 no. 10:16-18 0 '65.
(MIRA 18:12)

L 27811-66 EWT(d)/EWT(m)/EWP(g)/T/EWP(v)/EWP(k)/ETC(m)-6/EWP(1) IJP(c) WW/JW/WE

ACC NR: AP6005794 (A) SOURCE CODE: UR/0118/65/000/010/0016/0018

AUTHOR: Khokhryakov, P. A. (Candidate of technical sciences); Shpunt, M. I.
(Engineer)

ORG: none

TITLE: Circuits for automatic control of quality of petroleum products

SOURCE: Mekhanizatsiya i avtomatizatsiya proizvodstva, no. 10, 1965, 16-18

TOPIC TAGS: automatic control, automatic control system, automatic control theory, petroleum product, petroleum engineering

ABSTRACT: By using the results of running analyses of kerosine and diesel fuel produced by an atmospheric-and-vacuum tube still as a basis, an automatic control system for the still was developed. Two kerosine quality factors — flash point and 96% Engler boiling temperature — were selected for the automatic control. A correlation coefficient (0.168) and a correlation ratio (0.243) were calculated from the data of 476 analyses; the correlation proved to be linear and weak. For the diesel fuel, the 96% Engler boiling temperature was set. A principal flow diagram shows the general automatic features of the still designed on the basis of the above data. Orig. art. has: 2 figures and 1 table.

SUB CODE: 13, 09 / SUBM DATE: none

Card 1/1

UDC: 003.63.621.3.078:62.634.2

1. L. I. LITVIN, A. I., SHVETZ, M. Ya., POKHODIN, M. N.

2. 1953 (600)

3. Curve, Test No. 10

7. Test on the effect of the quaternary on MgO-CaO-PbO₂-H₂O. Zhur. prikl. khim.
24 No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

1ST AND 2ND ORDERS		PROCESSES AND PROPERTIES INDEX		3RD AND 4TH ORDERS	
<p>Equilibrium of the reciprocal system sodium sulfate-ammonium acid carbonate-water at 0°. A. P. Belopolski, S. Ya. Shpunt and M. T. Serebrennikova. <i>J. Applied Chem.</i> (U. S. S. R.) 7, 669-86 (1934).—Conclusions derived previously (<i>C. A.</i> 26, 897) were confirmed experimentally in regard to the mutual distribution of the cryst. fields at the temp. below the transformation point of 47°. The reciprocal salt couple $\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O} + \text{NH}_4\text{HCO}_3$ is stable at 0°. The equil. diagram at 0° is characterized by 5 cryst. fields, corresponding to the following solid phases: $\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O}$, $\text{Na}_2\text{SO}_4 \cdot (\text{NH}_4)_2\text{SO}_4 \cdot 4\text{H}_2\text{O}$, $(\text{NH}_4)_2\text{SO}_4$, NH_4HCO_3 and NaHCO_3. The invariant points of the isotherm correspond to the following given phases: $P_1 - (\text{NH}_4)_2\text{SO}_4 + \text{Na}_2\text{SO}_4 \cdot (\text{NH}_4)_2\text{SO}_4 \cdot 4\text{H}_2\text{O} + \text{NH}_4\text{HCO}_3$; $P_2 - \text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O} + \text{Na}_2\text{SO}_4 \cdot (\text{NH}_4)_2\text{SO}_4 \cdot 4\text{H}_2\text{O} + \text{NH}_4\text{HCO}_3$; $P_3 - \text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O} + \text{NaHCO}_3 + \text{NH}_4\text{HCO}_3$. The points P_2 and P_3 are incongruent, while the point P_1 is congruent and constitutes the end of the crystn. path of the system at 0°. When the temp. is lowered there is observed a decrease of the fields of NaHCO_3 and of the double salt, accompanied by a simultaneous increase of those of mirabilite and $(\text{NH}_4)_2\text{CO}_3$. This leads to a practical conclusion about the possible sepn. of these salts from the lyes that are obtained in the prepn. of Na_2CO_3 and $(\text{NH}_4)_2\text{SO}_4$ from mirabilite. 0° is the temp. that lies within the transformation range of the couple $\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O} + \text{NH}_4\text{HCO}_3$. Diagrams for the detn. of various contents of salts by means of coordinates are presented, and the exptl. procedure is discussed. A. A. Bochtlingk</p>					
<p>ASB-35A METALLURGICAL LITERATURE CLASSIFICATION</p>					

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The reciprocal system sodium sulfate ammonium bicarbonate water at low temperatures. A. P. Belopol'skii and R. Ya. Shpunt. *J. Applied Chem. (U. S. S. R.)* 2, 105 (1949) (English 211) (1950); cf. C. A. 20, 2431. A scheme of polythermal changes is given for the system Na_2SO_4 , NH_4HCO_3 , H_2O for temps. below 0° . The isotherms for the system at -5° and -10° are constructed. The intersecting isotherms at -5° with 3 salts in the solid state correspond to the following stable phases: P_1 ($\text{NH}_4\text{SO}_4 + \text{Na}_2\text{SO}_4$), P_2 ($\text{NH}_4\text{SO}_4 + \text{Na}_2\text{SO}_4 + 4\text{H}_2\text{O}$), P_3 ($\text{NH}_4\text{SO}_4 + \text{Na}_2\text{SO}_4 + 4\text{H}_2\text{O} + \text{NH}_4\text{HCO}_3$), P_4 ($\text{Na}_2\text{SO}_4 + 10\text{H}_2\text{O} + \text{NaHCO}_3 + \text{NH}_4\text{HCO}_3$), P_5 ($\text{Na}_2\text{SO}_4 + 10\text{H}_2\text{O} + \text{NaHCO}_3 + \text{NH}_4\text{HCO}_3 + 5\text{Na}_2\text{SO}_4$), P_6 ($\text{Na}_2\text{SO}_4 + 10\text{H}_2\text{O} + \text{NaHCO}_3 + \text{NH}_4\text{HCO}_3 + \text{ice}$), and T ($\text{NaHCO}_3 + \text{NH}_4\text{HCO}_3 + \text{ice}$). The corresponding phases for -10° are: P_1 and P_2 (same as for -5°) and R ($\text{Na}_2\text{SO}_4 + 10\text{H}_2\text{O} + \text{NH}_4\text{HCO}_3 + \text{ice}$). The NaHCO_3 field is absent at -10° . Thermal analysis shows that the temp. of the invariant point with stable phases $\text{Na}_2\text{SO}_4 + 10\text{H}_2\text{O} + \text{NaHCO}_3 + \text{NH}_4\text{HCO}_3 + \text{ice}$ is -5.0° . The compn. of the soln. as found by extrapolation, is expressed by the following figures (equivs. for salts per 1000 g. H_2O): $\text{Na}_2\text{SO}_4 = 0.81$; $(\text{NH}_4)_2\text{SO}_4 = 0.70$; and $\text{NH}_4\text{HCO}_3 = 1.24$. Diagrams and tables are given. Ten references. A. A. B.

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PROCESSES AND PROPERTIES INDEX

The lower transformation point of the reciprocal system sodium sulfate-ammonium bicarbonate-water. A. P. Belopol'skii and S. Ya. Shpunt, *J. Applied Chem.* (U. S. S. R.) 8, 1125-33 (in French 1135) (1935); cf. *Q. A. 29*, 6825. —The temp. of the lower transition point, 16.7° and the isotherm for this temp. is given. At this invariant point the solid phases present are $\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O}$ + $\text{Na}_2\text{SO}_4 \cdot (\text{NH}_4)_2\text{SO}_4 \cdot 4\text{H}_2\text{O}$ + NH_4HCO_3 + NH_4HCO_3 . H. M. Leicester

CLASSIFICATION

ASB 55A METALLURGICAL LITERATURE

The aqueous reciprocal system sodium sulfate-ammonium bicarbonate-water at -17° . A. P. Belopol'skii and S. Ya. Shpunt. *J. Applied Chem.* (U. S. S. R.) 8, 1136-1140 (in French 1142) (1935).—The isotherm at -17° is given. The double salt $\text{Na}_2\text{SO}_4 \cdot (\text{NH}_4)_2\text{SO}_4 \cdot 4\text{H}_2\text{O}$ which decomps. in the ternary system $\text{Na}_2\text{SO}_4 \cdot (\text{NH}_4)_2\text{SO}_4 \cdot \text{H}_2\text{O}$ at -10° exists in the presence of NH_4HCO_3 even below -47° . The intersecting isotherms with 3 salts in the solid state correspond to the following stable phases: 1' $\text{Na}_2\text{SO}_4 \cdot (\text{NH}_4)_2\text{SO}_4 \cdot 4\text{H}_2\text{O} + \text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O} + (\text{NH}_4)_2\text{SO}_4$; 2' $\text{Na}_2\text{SO}_4 \cdot (\text{NH}_4)_2\text{SO}_4 \cdot 4\text{H}_2\text{O} + (\text{NH}_4)_2\text{SO}_4 + \text{NH}_4\text{HCO}_3$; 3' $\text{Na}_2\text{SO}_4 \cdot (\text{NH}_4)_2\text{SO}_4 \cdot 4\text{H}_2\text{O} + \text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O} + \text{NH}_4\text{HCO}_3$; 4' $\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O} + \text{NH}_4\text{HCO}_3 + \text{ice}$.

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PROCESSES AND PROPERTIES INDEX

The quaternary system $K_2SO_4-Na_2SO_4-(NH_4)_2SO_4-H_2O$ at 60° . A. P. Belopol'skii, S. Ya. Shpunt and N. P. Aleksandrov. *Akhti* (U. S. S. R.) 1936, No. 3, 17-31. -- Tables and graphs are given. Sixty-eight references. A. Pestoff

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

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The partial pressures of ammonia, carbon dioxide and water over ammonia-sulfate and ammonia-chloride solutions. A. P. Helopol'skii, S. Ya. Shpunt and I. M. Palkina. *J. Chem. Ind. (U. S. S. R.)* 14, 717-19(1937); cf. *C. A.* 31, 4450. There is little assoc. of NH_3 and CO_2 in the gas phase. The partial pressure of CO_2 rises very rapidly and that of NH_3 falls when salt solns. of NH_3 are carbonated. The H_2O pressure is hardly changed. The pressures of all 3 components rise rapidly with temp.

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ASME-31A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND CRUISES																										3RD AND 4TH CRUISES																									
PROCESSES AND PROPERTIES INDEX																										PROCESSES AND PROPERTIES INDEX																									
<p>CA</p> <p>The system $\text{NH}_4\text{H}_2\text{PO}_4\text{-NaNO}_3\text{-H}_2\text{O}$. I. S. Ya. Shpunt. <i>J. Applied Chem.</i> (U. S. S. R.) 13, 9-18 (in French, 18) (1940).—The $\text{NH}_4\text{H}_2\text{PO}_4\text{-NaNO}_3\text{-H}_2\text{O}$ system was investigated by examg. various ternary groups of components that can occur in the system. In Part I the system $\text{NaH}_2\text{PO}_4\text{-NH}_4\text{H}_2\text{PO}_4\text{-H}_2\text{O}$ is described. The system is characterized by the satn. fields of the solid phases $\text{NH}_4\text{H}_2\text{PO}_4$, $\text{NaH}_2\text{PO}_4 \cdot 2\text{H}_2\text{O}$, ice. The ternary cryohydrate point of the system corresponds to the temp. -12.1° and the compn. $\text{NH}_4\text{H}_2\text{PO}_4$ 8.0, NaH_2PO_4 26.6 and H_2O 65.4%. II. The ternary system $\text{NaNO}_3\text{-NaH}_2\text{PO}_4\text{-H}_2\text{O}$. <i>Ibid.</i> 19-28 (in French, 28).—The system has satn. fields of the solid phases NaNO_3, $\text{NaH}_2\text{PO}_4 \cdot 2\text{H}_2\text{O}$, ice. There is a eutectic point with the solid phases $\text{NaNO}_3 + \text{NaH}_2\text{PO}_4 + \text{ice}$ at -19.4° and compn. NaNO_3 30.8, NaH_2PO_4 7.4 and H_2O 61.8%. A. A. Podgorny</p>																																																			
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